REMARKS

The Present Application was submitted to the U.S. Patent and Trademark Office on 16 June 2006. The Present Application is a 35 U.S.C. § 371 National Phase filing of PCT Patent Application No. PCT/US2005/0029815, which was filed with the U.S. Patent & Trademark Office (USPTO) as Receiving Office of the Patent Cooperation Treaty on 22 August 2005. The 35 U.S.C. § 371 National Phase Requirements were completed on 24 July 2007. Additionally, the Present Application claims priority to U.S. Provisional Patent Application No. 60/603,843, filed with the USPTO on 23 August 2004.

By this Response, Claims 1, 8, 14 and 16 have been amended. Accordingly, Claims 1, 3-8, 10-4, 16 and 19-20 remain pending.

In the 16 September 2009 Communication, the Examiner again rejected Claims 1, 3-4, 7-8, 11-4 and 16 as being anticipated, under 35 U.S.C. § 102(e), by U.S. Patent No. 7,251,406 to Luo *et al.* ("*Luo*"). Additionally, the Examiner rejected Claims 5-6, 10 and 19-20 as being unpatentable over *Luo* (in which the Examiner took official notice of the limitations in the Claims). These rejections are essentially the same rejections made in the 18 February 2009 Final Office Communication, to which Applicants responded on 23 July 2009 (and, further, submitted a Request for Continued Examination on 27 July 2009, which was granted by the 16 September 2009 Office Communication).

Additionally, in the 16 September 2009 Office Communication, the Examiner provided comments to Applicants's 23 July 2009 Response. However, Applicants are confused by the Examiner's comments, which seem to indicate that the Examiner treated at least one element of the Claims of the Present Application in different

respects. Specifically, in the 16 September 2009 Office Communication (in the "Response to Arguments" Section), the Examiner stated that "[a]s outlined in the Final Rejection and above, the side surfaces (referred to sidewalls in claim 14) of the core are interpreted as only the side surfaces of portion 206, and do not include the side surfaces of portion 207." 16 Sep 09 Communication, p. 9.

Respectfully, Applicants assert that this statement is contradictory to the Examiner's comments elsewhere in the 16 Sep 09 Communication. For example, when providing his rejection of Independent Claim 1, the Examiner states that "the waveguide extension [has] a core (206, 207) formed of a single material on a planar substrate structure (201)." 16 Sep 09 Communication, p. 3. Later, the Examiner states that the predetermined plurality of steps formed into the top surface of the core are represented by "the steps formed by portions 206, 207" in Figure 2a of *Luo*. *Id.* Thus, by these textual references, Applicants understand that the Examiner is interpreting the core of *Luo* to comprise reference numerals 206 and 207.

In addition to the Examiner's comments on Page 9 of the 16 September 2009 Office Communication, the Examiner does contend, in his rejection, that the side surfaces are limited to reference numeral 206. However, this contention does not comport with the language of the Claims of the Present Application, which do not split the core into to separate portions. Rather, the core is disclosed, in Independent Claim 1, for example, as having, *inter alia*, being formed of a single material and having a top surface, a bottom surface and side surfaces.

Therein lies the confusion on Applicants's part. On one hand, if the Examiner intends the disclosure of the core in *Luo* to be limited to reference numeral 206, then the

Present Application cannot be said to read upon *Luo*, as reference numeral 206 does not have "a predetermined plurality of steps formed into the top surface of the core." On the other hand, if the Examiner intends the disclosure of the core in *Luo* to encompass reference numerals 206 and 207, then the Present Application cannot be said to read upon *Luo*, as the core of *Luo* does not have side surfaces which are "smooth from the first end of the core to the second end of the core" and "create a single, uniform, horizontal layer." Further, if either interpretation is intended, the Present Application cannot be said to read upon *Luo*, as reference numeral 206 (*i.e.*, the core or the bottom portion of the core, depending on the Examiner's interpretations above) does not have a "planar bottom surface adjacent the planar substrate structure."

Each of these quotations are taken from Independent Claim 1 of the Present Application; however, they are present, in one form or another, in the other Independent Claims.

These distinctions serve one of the goals of the Present Application, to wit: providing "a relatively simple and reliable process for fabricating the tapered waveguide on a plana substrate structure so that it can be integrated with a PLC wageguide." Present Application, p. 2, lns. 17-9.

To eliminate any further confusion regarding the scope of the Claims of the Present Application, Applicants have revised Independent Claims 1, 8 and 14 to make them read with greater clarity. Further, amendments have been made to more accurately indicate the scope of the Present Application. In particular, Independent Claims 1, 8 and 14 now require the side surfaces to comprise a flat surface from the first end of the core. Support for these amendments is set forth in the Present Application's

discussion of the lateral taper, set forth generally in the Present Application at pp. 5-6, with reference to Fig. 5.

In light of the Remarks and Amendments presented herein, Applicants respectfully assert that this Response overcomes the latest rejections, and places the Present Application in condition for allowance. Accordingly, Applicants requests as such. Should the Examiner not agree, or have any further questions, the Examiner is requested to contact Applicants's undersigned representative.

Date: 16 March 2010

Respectfully submitted,

MOLEX INCORPORATED

/ Timothy M. Morella /

Timothy M. Morella
Registration No. 45277

MOLEX INCORPORATED
2222 Wellington Court
Lisle, Illinois 60532 1682
UNITED STATES OF AMERICA

Telephone: 630 527 4660
Facsimile: 630 416 4962
Email: timothy.morella@molex.com